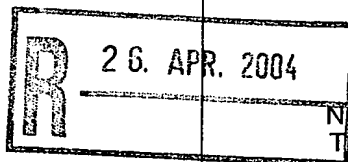


From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

Dunnwald, Dieter
CLARIANT INTERNATIONAL LTD.
Rothausstrasse 61
CH-4132 Muttenz 1
SUISSE



NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

Date of mailing
(day/month/year)

23.04.2004

Applicant's or agent's file reference
2002CH005

IMPORTANT NOTIFICATION

International application No.
PCT/B 03/02396

International filing date (day/month/year)
11.06.2003

Priority date (day/month/year)
13.06.2002

Applicant
CLARIANT INTERNATIONAL LTD et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international
preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 epmu d
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Authorized Officer

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2002CH005	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/IB 03/02396	International filing date (<i>day/month/year</i>) 11.06.2003	Priority date (<i>day/month/year</i>) 13.06.2002
International Patent Classification (IPC) or both national classification and IPC C09B62/513, C09B62/513		
Applicant CLARIANT INTERNATIONAL LTD et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 34 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 01.12.2003	Date of completion of this report 23.04.2004
Name and mailing address of the international preliminary examining authority: <div style="display: flex; align-items: center;"> <div> European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465 </div> </div>	Authorized Officer Weisbrod, T Telephone No. +49 89 2399-8931

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/B 03/02396**

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

Description, Pages

1-31 filed with telefax on 06.04.2004

Claims, Numbers

1-6 filed with telefax on 06.04.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

see separate sheet

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/IB 03/02396

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☐ claims Nos.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 1-6 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the Standard.

☐ the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3-4
	No: Claims	1,2,5,6
Inventive step (IS)	Yes: Claims	
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-6
	No: Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 03/02396

Re Item I

Basis of the opinion

In response to the written opinion the applicant has filed amended pages 1-31 of the description and amended claims 1-6. On pages 2 and 4 of the description as well as in claims 1 and 2 the erroneous values " $\text{CH}_2\text{CH}_2\text{SO}_3\text{H}$ " for X_1/X_2 respectively Z_1/Z_2 have been replaced with $\text{CH}_2\text{CH}_2\text{OSO}_3\text{H}$. Basis for this correction is found in the reaction schemes on pages 6 and 8. Furthermore, Z_1 and Z_2 in claims 1 and 2 have been replaced with X_1/X_2 for the sake of consistency between the description and the claims. The said amendments are allowable under Article 34(2)(b) PCT and Rule 91.1 PCT.

However, no basis can be found in the application as filed for the replacement of the value SO_3H with OSO_3H for Y on amended page 13, line 3. Consequently, this amendment does not comply with the requirements of Article 34(2)(b) PCT and the IPER has been established as if this amendment had not been made.

The application is directed to

- (i) mixtures containing disazo dyes (1), characterized in that the fraction of the dye (1d) in the mixtures as per formula (1) is more than 40% (claims 1-2),
- (ii) the use of such mixtures as a blue component in the trichromatic dyeing process (claim 3),
- (iii) ink jet printing inks comprising the said mixtures (claim 4),
- (iv) a printing or dyeing process involving such mixtures (claim 5), and
- (v) hydroxyl- or nitrogen-containing organic substrates printed or dyed with the said mixtures (claim 6).

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

In view of the clarity and novelty objections raised under the items V.1.1 and V.3 below, an assessment of the present application with regard to the criterium of inventive step has not been possible.

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/IB 03/02396

1 Deficiencies of the Application under Article 6 PCT

- 1.1 Present claims 1 and 2 leave the reader in doubt whether the percentage values characterizing the fractions of the compounds 1d, 2, and 3 of the claimed mixtures represent weight, volume, or mole percentage values. Consequently, the subject matter of claims 1 and 2 is not clearly defined. In this context it is noted that the application does not provide an unambiguous definition which kind of percentage values are meant in the claims, such that it appears impossible to render the claims clear in the light of the application as filed. This applies also for the passage on page 8, lines 3-4, which cannot serve as an unambiguous basis that the percentage values in claims 1 and 2 mean mole percentage values and nothing else. Furthermore, it is noted that an unclear definition cannot be allowed in a claim if the definition is essential having regard to the invention. Equally, an unclear definition cannot be used to distinguish the claimed matter from the prior art (cf. item V.3 below concerning document D1).
- 1.2 In addition, the statement that any reference to compounds and mixtures in the plural shall also be construed as a reference to a compound or mixture in the singular (the application, page 4) implies that claims 1 and 2 are also directed to compound 1d per se rather than to mixtures as defined in the claims. This inconsistency between description and claims adds to the unclarity of the claims.

2 Reference is made to the following documents.

- D1: CH-A-657 865, 30.09.1986; cited in the application.
D2: DE-A-195 23 245, 02.01.1997.
D3: CH 302 016, 01.12.1954.
D4: US-A-4 911 735, 27.03.1990; cited in the application.
D5: Fachlexikon ABC Chemie, Band 2, 1987, 1206: "Wasserglas".
D6: Roempp Internet-Edition, "Wasserglas".

D5 and D6 were introduced by the applicant during the procedure.

3 Novelty

In view of D1 the present claims 1, 2, 5, and 6 do not comply with the criterion of novelty according to Article 33(2) PCT.

D1 relates to reactive disazo dyes such as the dye according to example 1 (page 5; identical with present compound 1a), their use in dyeing processes of hydroxyl-containing organic substrates, as well as the dyed substrates. According to the present application the addition of 1.5 to 2.4 equivalents of a strong base (e.g. sodium hydroxide) to the dye of example 1 according to D1 produces mixtures with 1d as the main component as claimed in the present claims 1 and 2 (cf. present application, page 7, lines 14-17; page 8, lines 3-4; and page 16, examples 1 and 2). Similarly, the document D1 discloses already a colouration procedure (page 7; "Färbevorschrift V") wherein 6 parts of the said dye of example 1 is treated with 50 parts of a solution comprising 16 g of sodium hydroxide per litre. Such mixture contains 3.28 mol sodium hydroxide per mol of dye, i.e. 1.64 equivalents of sodium hydroxide based on the dye, and is thus considered to produce a mixture according to the present claims 1 and 2 (note that according to page 16 of the present application 1.5 respectively 2 equivalents of sodium hydroxide result in mixtures containing about 36 parts respectively about 77 parts of 1d). The subject matter of the present claims 1, 2, 5, and 6 is thus considered to lack novelty in view of D1, unless the applicant was able to provide substantiated evidence that the alkaline dye mixture according to "Färbevorschrift V" of D1 does not fall under the scope of the present claims 1 and 2. The mere fact that in the "Färbevorschrift V" of D1 a certain amount of "Wasserglas" is present besides the sodium hydroxide does not per se render the claimed matter novel over D1, unless this was substantiated by an appropriate comparison test (however, in this respect the applicant's attention is again drawn to the fact that the exact composition of the claimed mixture is not clearly defined in the present claims 1 and 2; cf. item 1.1 above).

D2 and **D3** relate to disazo reactive dyes but do not disclose the present compound 1d or mixtures containing this compound. The documents do thus not appear relevant to the question of novelty of the present application.

D4 relates to a dyeing process with a trichromatic dyeing recipe wherein at least one of the dyes reacts with the fibre via a vinyl sulfonyl radical. The document does not appear relevant to the question of novelty of the present claimed matter, because mixtures containing the present dye 1d are not explicitly disclosed in this document.

D5 and **D6** relate to "Wasserglas" and its properties. These documents are irrelevant to the question of novelty of the application.